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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,095	10/31/2003	Donald W. Verser	210441US (CPCM:0016/FLE)	2662
7590 01/18/2006 Michael G. Fletcher Fletcher Yoder P. O. Box 692289 Houston, TX 77269-2289			EXAMINER LU, C CAIXIA	
			ART UNIT 1713	PAPER NUMBER

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/699,095

Applicant(s)

VERSER ET AL.

Examiner

Caixia Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-20 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-20 and 28-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/4/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-13, 15-20 and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kendrick et al. (US 6,204,344) in view of Hanson (US 5,597,892).

The instant claims are directed to a process for producing solid polymer particles by conducting slurry polymerization in a loop reactor, passing the intermediate polymer slurry product through a heated conduit to producing a concentrated intermediate product and a vapor, and separating the vapor from the concentrated intermediate product by centrifugal force in a cyclone.

Kendrick teaches conducting a slurry polymerization process in a loop reactor to produce a polymer slurry intermediate product and recovering the polymer solid by passing the polymer slurry intermediate product to a heating conduit, then a first flash tank to separate the vapor of the diluent and unreacted monomers from the intermediate product, the vapor is then transferred to a first cyclone to separate the entrained polymer solids from the vapor, then passing the vapor to a second conduit, a second flash tank and a second cyclone to further separate the solids from the vapor, and finally passing the vapor through a filter for recycling (col. 8, line 33 to col. 11, line 58, and Examples 1-4).

Apparently, Kendrick uses the flash tank rather than the cyclone of the instant claims to separate the vapor from the intermediate product. Hanson teaches using a

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cyclone to separate the vapor of the diluent and unreacted monomers from the intermediate product (col. 2, lines 10-63).

Hanson's cyclone to replace Kendrick's flash tank have the same function of separating the vapor and polymer solids.

Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ Hanson's cyclone to replace Kendrick's flash tank and cyclone to simplify Kendrick's process and in the absence of any showing of criticality and unexpected results.

It is noted that the prior art does not expressly disclose separation of the polymer solids from the vapor in the cyclone by centrifugal force; however, it is understood in the art that the cyclone is designed to use centrifugal force to separate the solid material from the non-solids. It is noted that the prior art does not expressly disclose the percentage of the vapor to be separated from the polymer slurry intermediate product, the length of the receiving zone and the residence time for drying the polymer solids. However, any such differences are deemed to be result effective variables that one of ordinary skill in the art would be expected to manipulate to advantage based on a consideration of both economic and performance factors. If applicants believe that one or more limitations are critical to the invention, then applicants should limit the claims to reflect such critical limitations as well as indicate where in the specification such critical limitations are discussed and demonstrated.

The limitations of all claims have been considered and are deemed to be within the purview of the prior art.

***Response to Arguments***

3. Applicant's arguments with respect to previous rejections of record have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

4. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on November 4, 2005 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to read 'Caixia Lu'.

Caixia Lu, Ph. D.  
Primary Examiner  
January 11, 2006